

### **REMARKS**

This communication responds to the Office Action mailed on April 25, 2008. Claims 7, 19 and 22 are amended, no claims are canceled, and no claims are added in this communication. As a result, claims 1-4, 7-11, 13-15, 18-19, 22 and 27 are now pending in this Application.

#### **Specification Objections**

The Specification was objected to under 35 U.S.C. 112, first paragraph, as not being written in “full, clear, concise, and exact terms.” Objections were also raised to the Specification based on informalities. The Title of the Application was objected to as not being descriptive.

The Applicant has amended paragraphs [0015], [0020] and [0032] of the Specification as suggested by the Office. The Applicant has also amended the Title of the Application into “MULTI-TONE COMMUNICATIONS APPARATUS, SYSTEMS, AND METHODS”. Reconsideration and withdrawal of the objection to the Specification and the Title is thus respectfully requested.

#### **§112 Rejection of the Claims**

Claim 19 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention.

The Applicant has amended claim 19 by removing the wording “**prior to the comparing**” from claim 19, and thus believes that this amendment of claim 19 overcomes the rejection of claim 19 under 35 U.S.C. § 112, second paragraph. Withdrawal of the rejection of claim 19 is thus respectfully requested.

#### **§102 Rejection of the Claims**

Claims 15, 18 and 27 were rejected under 35 U.S.C. § 102(a) for anticipation by Rogerson (U.S. 2003/0099299 A1, hereinafter “Rogerson”). The Applicant does not admit that Rogerson is prior art and reserves the right to swear behind this reference at a later date. In addition, because the Office has not properly established a *prima facie* case of anticipation, the Applicant respectfully traverses this rejection of the claims.

Anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).

The Applicant submits that Rogerson does not disclose the feature “translating a first bit stream into a **multi-tone communications signal having a substantially simultaneous multi-tone signaling bandwidth of greater than about 20 percent of an associated carrier frequency**” as recited in claim 15.

The Office asserts that figures 4, 16, and 26 as well as paragraphs [0076] and [0082] of Rogerson disclose this feature of claim 15. However, a close reading of Rogerson reveals that this assertion is incorrect. Actually, these cited portions of Rogerson do not mention “**carrier**” or “**carrier frequency**” at all, and thus cannot disclose “**a multi-tone communications signal having simultaneous multi-tone signaling bandwidth of greater than about 20 percent of an associated carrier frequency**”. Accordingly, Rogerson does not disclose the feature “translating a first bit stream into a **multi-tone communications signal having a substantially simultaneous multi-tone signaling bandwidth of greater than about 20 percent of an associated carrier frequency**” as recited in claim 15. In addition, the Office does not point out and the Applicant cannot find any other parts of Rogerson that disclose this feature of claim 15. For at least this reason, the Applicant respectfully submits that Rogerson does not anticipate claim 15 and its dependent claim 18.

The above conclusion with respect to independent claim 15 also applies to independent claim 27, which has similar features to independent claim 15. Reconsideration and withdrawal of the rejections of claims 15, 18 and 27 under § 102(a) are thus respectfully requested.

### §103 Rejection of the Claims

Claims 1-4, 19 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rogerson in view of Walker (U.S. 2004/0048574 A1, hereinafter “Walker”). Claims 7-11, 13 and 14 were also were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rogerson in view of Walker and further in view of O’Neill (U.S. 5,559,866 A, hereinafter “O’Neill”). The Applicant does not admit that Walker and O’Neill are prior art and reserves the right to swear

behind these references at a later date. In addition, the Applicant respectfully traverses the rejection of these claims under 35 U.S.C. § 103(a) for the reasons stated below.

Claim 1 recites “a multi-bit encoder coupled to a multi-tone generator to provide a **multi-tone communications signal having a substantially simultaneous multi-tone signaling bandwidth of greater than about 20 percent of an associated carrier frequency**” (emphasis added), similar in character to the feature of claim 15. For the reasons discussed above with respect to claim 15, the Applicant submits that Rogerson does not disclose this feature of claim 1. No combination of Walker with Rogerson remedies this deficiency. Thus, no combination of Rogerson and Walker teaches or suggests each and every claimed feature of claim 1. Thus, the Applicant respectfully submits that the rejection of claim 1 is unsupported. This same argument applies to dependent claims 2-4, as well as claims 19 and 22, which respectively have features similar to this feature of claim 1.

Amended claim 7 includes “a plurality of phasor detectors to determine a presence of a plurality of tones included in a **multi-tone communications signal having a substantially simultaneous multi-tone signaling bandwidth of greater than about 20 percent of an associated carrier frequency** by comparing a combined amount of two measured orthogonal signal components to a threshold value”. For the reasons discussed above with respect to claim 15, the Applicant submits that Rogerson does not disclose this feature of claim 7. No combination of Walker, O'Neill, and/or Rogerson remedies this deficiency. Thus, no combination of Rogerson, Walker, and/or O'Neill teaches or suggests each and every claimed feature of claim 7. Thus, the Applicant respectfully submits that the rejection of amended independent claim 7 and its dependent claims 8-10 is improper. This argument presented with respect to amended independent claim 7 also applies to independent claim 11 and its dependent claims 13 and 14, because independent claim 11 has features similar to this feature of claim 7.

Reconsideration and withdrawal of the rejections of claims 1-4, 7-11, 13-14, 19 and 22 under 35 U.S.C. § 103(a) as being unpatentable are thus respectfully requested.

### **RESERVATION OF RIGHTS**

In the interest of clarity and brevity, the Applicant may not have addressed every assertion made in the Office Action. The Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. The Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. The Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, the Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. The Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

**CONCLUSION**

The Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's representative at (210) 308-5677 to facilitate prosecution of this application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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